

**§ 84.1146**

**42 CFR Ch. I (10–1–13 Edition)**

(e) The total amount of unretained test suspension, after drying, in samples taken during testing, shall not exceed 1.8 milligrams for any single test.

**§ 84.1146 Lead fume test for dust, fume, and mist respirators; minimum requirements.**

(a) Three non-powered respirators will be tested for a period of 312 minutes each at a continuous airflow rate of 32 liters per minute.

(b) The relative humidity in the test chamber will be 20–80 percent, and the room temperature approximately 25 °C.

(c) The test suspension in the test chamber will not be less than 15 nor more than 20 milligrams of freshly generated lead-oxide fume, calculated as lead (Pb), per cubic meter of air.

(d) The fume will be generated by impinging an oxygen-gas flame on molten lead.

(e) Samples of the test suspension will be taken during each test period for analysis.

(f) The total amount of unretained test suspension in the samples taken during testing, which is analyzed and calculated as lead (Pb), shall not exceed 1.5 milligrams of lead for a non-powered air-purifying respirator.

**§ 84.1147 Silica mist test for dust, fume, and mist respirators; minimum requirements.**

(a) Three non-powered respirators will be tested for a period of 312 minutes each at a continuous airflow rate of 32 liters per minute.

(b) The room temperature in the test chamber will be approximately 25 °C.

(c) The test suspension in the test chamber will not be less than 20 nor

more than 25 milligrams of silica mist, weighed as silica dust, per cubic meter of air.

(d) Mist will be produced by spraying an aqueous suspension of flint (99+ percent free silica), and the flint shall be ground to pass 99+ percent through a 270-mesh sieve.

(e) Samples of the test suspension will be taken during each test period for analysis.

(f) The total amount of silica mist unretained in the samples taken during testing, weighed as silica dust, shall not exceed 2.5 milligrams for a non-powered air-purifying respirator.

**§ 84.1148 Tests for respirators designed for respiratory protection against more than one type of dispersoid; minimum requirements.**

Respirators designed as respiratory protection against more than one particulate hazard (dust, fume, or mist) shall comply with all the requirements of this part, with respect to each of the specific hazards involved.

**§ 84.1149 Airflow resistance tests; all dust, fume, and mist respirators; minimum requirements.**

(a) Resistance to airflow will be measured in the facepiece, mouthpiece, hood, or helmet of a dust, fume, or mist respirator mounted on a test fixture with air flowing at a continuous rate of 85 liters per minute, both before and after each test conducted in accordance with §§ 84.1144 through 84.1147.

(b) The maximum allowable resistance requirements for dust, fume, and mist respirators are as follows:

**MAXIMUM RESISTANCE**  
[mm. water-column height]

Type of respirator	Initial inhalation	Final inhalation	Exhalation
Pneumoconiosis- and fibrosis-producing dusts, or dusts and mists .....	12	15	15
Dust, fume, and mist, with single-use filter .....	30	50	20
Dust, fume, and mist, with reusable filter .....	20	40	20
Radon daughter .....	18	<sup>1</sup> 25	15
Asbestos dust and mist .....	18	25	15

<sup>1</sup> Measured after silica dust test described in § 84.1144.